Precizion*HALO*

Precise, Powerful, Petite

A photocell for future cities

The new Precizion*HALO* packs a number of features into its small, compact design and works with smart lighting driver Xitanium SR for low energy consumption and high performance.

Precizion*HALO* is an energy saving photocell with design features that have been optimised for the latest generation of LED low power drivers & connectors. (DALI compatible)

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Eco-system

The **Precizion**^{HALO} works within an Eco-system of components to deliver harmonious functionality, installation and upgrade solutions. Connecting with Zhaga Book 18 approved components, the **Precizion**^{HALO} works to a standard specification to enable the integration of IoT technology within outdoor LED street lighting furniture.

Using micro processor technology, the photocell (**Precizion**^{HALO}) sends signals to the SR Driver, via a 4-pin connector base. The recommended pin assignment enables a 24V DC power supply, as well as DALI control and a general Logic Signal Input (LSI).

The photocell securely locks into the base connector to IPX6, via a simple twist and lock system. This enhances installation, reduces maintenance requirements and simplifies upgrade processes, meaning future replacements can be installed in an instant.

The SR Driver provides power directly to the **Precizion**^{HALO} with SELV product classification, removing the requirement for mains power connection.

By incorporating all components within an independent eco-system, modules with a much smaller footprint can be developed to increase luminaire design flexibility.

Collaboration

This pioneering eco-system is only made possible through collaboration. Working with a number of collaborative partners (TE, Philips & Zhaga), a solution has been developed to deliver an industry standard that will drive the adoption of intelligent street lighting products and systems.

It is only through working with industry professionals that Lucy Zodion was able to understand the requirements of the photocell and how its design will effect all other components. Additionally, with the ratification of Book 18, it means all members of the Zhaga consortium had a single reference point of standardisation requirements, to base their solutions on.

As technology advances and requirements change, Lucy Zodion is confident that through collaboration it can continue to develop industry leading photocell technology that works within this universal and widely used standard.

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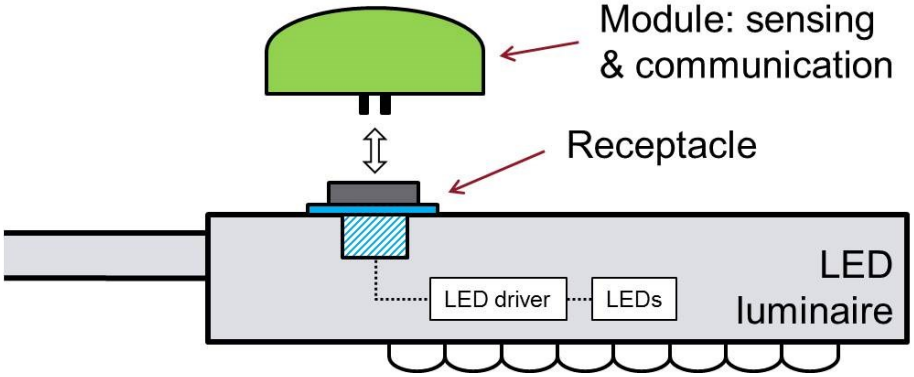
Design

The **Precizion**^{HALO} is the first photocell available in the market to work with the SR Driver and Zhaga approved (Book 18) base connectors. Its robust and compact design positions components into the underside of the unit, improving durability and increasing life expectancy

Working harmoniously alongside other Zhaga approved components, **Precizion**^{HALO} has been designed to fit in smart outdoor luminaires in preparation for future, smart technologies.

The **Precizion**^{HALO} works alongside a socketed twist and lock receptacle for minimal tooling requirements and enhanced installation efficiencies.

The photocell, socket and driver work together to form an interface that communicates, enhancing lighting control and data collection. The photocell module offers sensory inputs while also communicating with other luminaires in a network - only made possible through the SR driver.



Zhaga (Book 18)

The latest Zhaga specification defines a standardized interface between outdoor LED luminaires and modules for sensing and communication, bringing the Internet of Things to the outdoor lighting market via smart, upgradeable, future-proof fixtures.

The Zhaga Consortium has finalized a new specification that helps to bring the Internet of Things (IoT) to outdoor LED lighting fixtures. The specification, Zhaga Book 18, makes it easy to upgrade LED fixtures by adding or changing 24V sensor or controller modules that provide sensing and communication capabilities.

Smart LED lighting fixtures with sensing and communication capabilities can significantly improve the efficiency, maintenance and running costs of outdoor lighting networks. In this period of rapid IoT evolution, there are many unanswered questions about the correct choice of sensing technologies and communication protocols that future smart-lighting networks will require. However, outdoor LED lighting fixtures are being installed right now, with an expected lifetime of around 20 years or more, and the cost of retrofitting can be prohibitively expensive.

Zhaga's Book 18 solves this dilemma by enabling future-proof luminaires to be easily upgraded as technologies evolve.

Book 18 defines a standardised interface between a receptacle on the exterior of the LED luminaire and a sensing and communication module (**Precizion**^{HALO}) that fits into the receptacle. The standardised interface means that the module can be easily replaced in the field, allowing the luminaire to be upgraded according to new smart capabilities. Also, the luminaire can be shipped with a blank cap in the receptacle, allowing a module to be field-installed at a later date if required.

Book 18 defines the mechanical interface between the module or cap and receptacle. However, many non-critical aspects are unrestricted by the specification, allowing vendor differentiation and design innovation.

The specification has recommendations for the electrical interface, which features a 4-pin connector. The pin assignment enables a 24V DC power supply, required by some modules, as well as DALI control and a general Logic Signal Input (LSI).

Book 18 offers a number of advantages compared with the existing ANSI/NEMA standard C136.10-2010. This describes locking-type photo-control devices and mating receptacles, and is used mainly in the USA and the UK. Book 18 enables modules with a much smaller footprint, which in turn will allow greater design flexibility for the luminaire. Also, the Zhaga specification uses 24V rather than mains voltage.

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Hardware is an enabler to IoT

IoT and smart connected lighting are gaining prominence in a number of markets; outdoor lighting is one of these. Driven by a growing focus on reducing energy consumption and the need for better control, intelligent lighting solutions are being developed that can combat such issues and improve quality of life for users.

Rapid economic and infrastructure growth, increasing energy conservation initiatives and robust construction activity in industrial and commercial sectors, means that a standardisation of interfacing protocols is underway.

Recent research by Global Industry Analysts has revealed that Europe represents the largest market in intelligent lighting worldwide, with over a third of the market share. Furthermore increased adoption in Commercial, Industrial, Residential and Outdoor Applications offer market growth opportunities.

Dimmable Smart Street Lights

Within the research it has been found that there is an increasing adoption of dimmable smart streetlights. It has been calculated in the report that replacing traditional lighting with LED and intelligent control solutions can save up to 50% of electricity, which will inevitably drive demand.

In order for such demand to be met, it is the job of the physical hardware to enable smart solutions to be applied. In the case of the Precizion^{HALO}, a range of miniature photocells (hardware), it is the technology within the module that gathers, sends and receives data in order for dimming to be controlled.

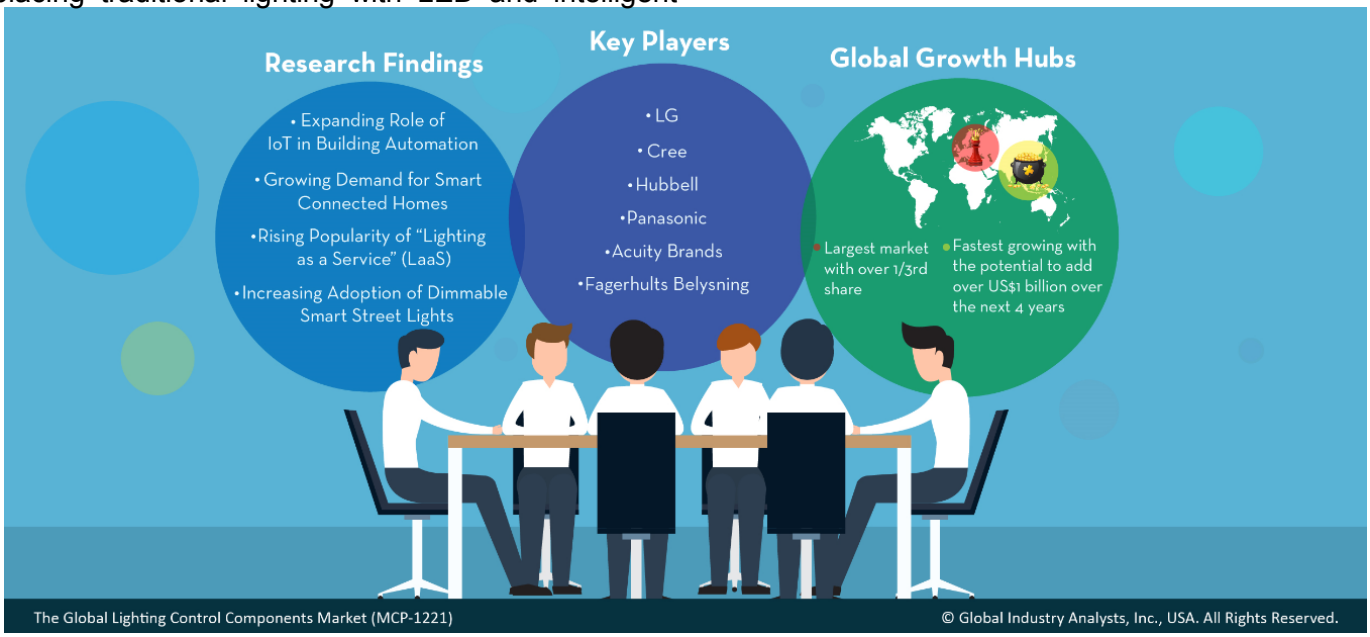
Furthermore, the entire eco-system is hardware based, enabling a standardised interface to be developed. Through this interface, intelligent communications can take place to better control the streetlight.

As with a phone, only the best apps are available to users who have the latest hardware to support them, outdoor luminaires are similar; by being able to upgrade hardware with ease, the latest intelligent software can be used .

This is why the simple push and twist interlocking system has been applied. Otherwise the cost of replacing or retrofitting for upgrades could be a deterrent.

Book 18 solves this dilemma by enabling future-proof luminaires to be easily upgraded as technologies evolve.

For more information on the Market Research Report visit: http://www.strategyr.com/MarketResearch/ViewInfoGraphNew.asp?code=MCP-1221



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PRESS

TE—Lumawise Endurance

ARRISBURG, Pa., USA – TE, a world leader in connectivity and sensors, has introduced a new compact connectivity solution for street lighting with LED light sources. TE´s LUMAWISE Endurance S module consists of a standardized interface between the receptacle and module base or sealing cap. Which uses an integrated single gasket that can accommodate and seal both luminaire and module using the same connection interface for either 40mm or 80mm diameter central management systems.

Central management systems offer more control, better programming, and higher efficiencies for LED lighting systems. The LUMAWISE Endurance S module offers greater flexibility in luminaire design and street lighting architecture. The system is field upgradeable, making it possible to simply and quickly upgrade existing luminaires.

Stand-alone system or complementary to ANSI/ NEMA solution

Specifically for outdoor LED light sources and drivers, LUMAWISE Endurance S has been designed as a standalone system and can be used in a complementary function as an auxiliary sensor module when additional functionality is required in ANSI/ NEMA based fixtures. Installation is easy due to its simple push-and-twist lock feature which does not require any tools and can be completed using one hand. The LUMAWISE Endurance S module can be mounted in any direction and offers improved sealing when compared to other systems. Modules can be exchanged and upgraded in only a few seconds without having to electrically isolate the lighting pole.

LUMAWISE Endurance S was co-developed with several partners to ensure a complete system is available, including application specific drivers and control nodes. TE also collaborated with the Zhaga Consortium, a global lighting-industry organization that standardizes components of LED luminaires.

Jonathan Catchpole, system architect at TE Connectivity said: *"The development of this new module was a collaborative process with the Zhaga Consortium, in which we were able to apply our extensive experience and expertise in street-light connectors. The focus of developing the new specification, Book 18, was to demonstrate the potential of new architecture and new functionalities which can create value for developers, installers and users of outdoor lighting. With an increased use of LED in outdoor applications comes a growing need for control of the LED for efficiency, maintenance and cost savings."*

"The standardized interface defined in Zhaga Book 18 enables the installation of future-proofed outdoor LED luminaires, which can be easily upgraded with smart communication and sensing capabilities," **said Dee Denteneer, Secretary General of Zhaga**. *"We are pleased to see that member companies including TE are already using the specification to develop products that will stimulate the market for smart outdoor LED luminaires."*

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PRESS

Zhaga enables IoT-upgradeable outdoor LED lighting fixtures

The latest Zhaga specification defines a standardized interface between outdoor LED luminaires and modules for sensing and communication, bringing the Internet of Things to the outdoor lighting market via smart, upgradeable, future-proof fixtures.

The Zhaga Consortium, a global association of lighting companies that is standardizing components of LED luminaires, has finalized a new specification that helps to bring the Internet of Things (IoT) to outdoor LED lighting fixtures. The specification, known as Zhaga Book 18, makes it easy to upgrade LED fixtures by adding or changing 24V modules that provide sensing and communication capabilities.

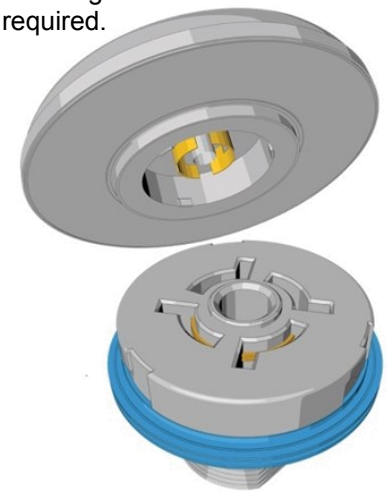
Demonstrating Zhaga's support for the merger of IoT and lighting technologies, this specification marks the first step in a new direction for Zhaga that will also enable similar capabilities for future-proofed indoor luminaires.

"This new Book 18 specification answers the industry's call for a standardized interface with a smaller footprint than existing designs," **says Dee Denteneer, Secretary General of Zhaga.** *"It enables the installation of future-proofed outdoor LED luminaires, which can be easily upgraded with smart communication and sensing capabilities. Moving forward, I expect Zhaga to make more contributions to bring the IoT into the lighting industry."*

Smart LED lighting fixtures with sensing and communication capabilities can significantly improve the efficiency, maintenance and running costs of outdoor lighting networks. In this period of rapid IoT evolution, there are many unanswered questions about the correct choice of sensing technologies and communication protocols that future smart-lighting networks will require. However, outdoor LED lighting fixtures are being installed right now, with an expected lifetime of around 20 years or more, and the cost of retrofitting can be prohibitively expensive.

Zhaga's Book 18 specification solves this dilemma by enabling future-proof luminaires that can be upgraded as technologies evolve.

Book 18 defines a standardized interface between a receptacle on the exterior of the LED luminaire and a sensing and communication module that fits into the receptacle. The standardized interface means that the module can be easily replaced in the field, allowing the luminaire to be upgraded via the addition of new smart capabilities. Also, the luminaire can be shipped with a blank cap in the receptacle, allowing a module to be field-installed at a later date if required.



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More information on Book 18 can be found on the Zhaga website at www.zhagastandard.org/books/book18.

About Zhaga

Zhaga is a global lighting-industry consortium that is standardizing components of LED luminaires, including LED light engines, LED modules, LED arrays, holders, electronic control gear (LED drivers) and connectivity fit systems. This helps to streamline the LED lighting supply chain, and to simplify LED luminaire design and manufacturing. Zhaga is also developing specifications that will enable smart, connected lighting and serviceable luminaires.

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PRESS

Lucy Zodion reveals NEW Precizion^{HALO} photocell compatible with Zhaga Book 18 interface

The new Precizion^{HALO} is an energy saving photocell made for connected street lighting systems, with optimised design features for the latest generation of outdoor LED streetlights, Signify SR drivers & TE Zhaga approved connectors.

Lucy Zodion, specialist in the design and development of street lighting products, reveals the **Precizion^{HALO}**– a new, compact photocell designed to work with smart lighting driver Xitanium SR and meet Zhaga Book 18 standardisation.

The **Precizion^{HALO}** is the first photocell available in the market to work with the SR Driver and Zhaga specified base connectors, enabling smart communication and sensing. Its robust and compact design positions components into the underside of the unit for surface mounting, improving durability and increasing life expectancy.

"The issue of Zhaga's Book 18 has been welcomed by Lucy Zodion." **says John Fox, Managing Director of Lucy Zodion.** ***"****With the standard now ratified, it is an essential element to Smart Lighting Controls within Future Cities, which we recognise as a huge opportunity for innovation. We have worked with a number of collaborative partners to create the* ***Precizion****^{HALO}, an intelligent Photocell platform designed to match the potential offered by this new interface, with an ecosystem that enhances future compatibility."*

Developing smart street lighting solutions for over 50 years, Lucy Zodion is dedicated to the manufacture of high-quality, innovative products that meet the specification of modern lighting technology. This dedication to innovation, combined with the introduction of the new Book 18 standard, has driven Lucy Zodion to collaborate with partners from the Zhaga consortium to design the pioneering photocell, which is compatible with components within the interface.

Benefits of the product include:

Precise: The **Precizion^{HALO}** offers accurate low level illuminance switching, reducing energy usage.

- Automatically turns streetlight on/off according to ambient light levels which can be programmed to desired lux level*
- Multi-level pre-set dimming profile options available (up to 8 stages)
- 20:20 lux luminance ratio as standard (positive and negative ratios available).
- Quick and easy installation due to minimal tooling

Powerful: Its uncompromising performance means the **Precizion^{HALO}** helps to minimise energy costs and maximise energy efficiency.

- Reflective PCB shielding components from heat stress. High impact resistance option available.
- Prolonged use, with a 15 year life expectancy and zero maintenance requirements
- Lowest power consumption than other photocells currently on the market
- Enables future-proof outdoor LED luminaires that can be upgraded as technologies evolve

Petite: An incredibly sleek design to complement today's modern light fitting, the photocell has been developed to fit harmoniously with other lighting components.

- No installation tool required
- Suitable for installations where space is at a premium and traditional alternatives do not fit
- Smaller footprint to allow greater design flexibility for the luminaire

More information about the **Precizion^{HALO}** can be obtained via sales@lucyzodion.com or 01422 317337.

About Lucy Zodion

Lucy Zodion Ltd is a company within the Lucy Group, a privately owned organisation of Lucy Group Ltd. Other companies in the group include Lucy Electric, Lucy Castings and Lucy Real Estate.

*factory programmed.

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Sound bites

The Business Tribune

John Fox, MD of West Yorkshire-based Lucy Zodion, agrees that the Zhaga interface will provide a "*New ecosystem" of suppliers, adding: "A consortium has to be making these things more open and interoperable."*
He acknowledges that the industry needs to help councils by developing standards if the potential of lampposts to act as electric car charging points, noise monitors or parking aids is to be realised.
"Social good counts for something but not when the cost of deployment is huge and data is regarded to be free. You can monetise these things… but this is where the issue of non-vendor lock-in becomes crucial," he said.

Source:http://thebusinesstribune.net/2017/07/smart-lighting-dim-views/

LUX
YOUR INDEPENDENT GUIDE TO LIGHTING

Philips Lighting is all set to bulk up on partners who can provide wireless smart lighting components, as the company plots its own Internet of Things (IoT) advance.

Steinel and Lucy Zodion join Gooee and Silvair, as well as 14 other firms, to join a certification programe that Philips launched a year ago.

Source: http://luxreview.com/article/2017/03/philips-broadens-iot-foothold-with-surprise-partnerships

LEDs MAGAZINE

"The lighting market is strongly influenced by multi-vendor requirements (multiple brands can offer a solution) of end users," said von Morgen. "*We believe in ecosystems for connectable components, providing 'an open standard building block' for more flexibility. The SR program is a global program, we see the clear need for a unified global approach that enables system players to establish entries in markets across the globe."*

Source: http://www.ledsmagazine.com/articles/2017/03/philips-adds-gooee-silvair-as-smart-lighting-partners.html

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Sound bites

Advertisement:

Universal 'System-Ready' Sockets for LED Lighting

A new universal 'system-ready' (SR) socket for LED street lighting installations addresses the constraints of 7-pin Nema sockets whilst delivering enhanced functionality. Steve Austin (Systems Sales Specialist with Philips Lighting) and John Fox (Managing Director of Lucy Zodion) explain how contractors and local authorities can benefit.

Q: Why is there a need for a new system-ready (SR) socket when we already have a 7-pin Nema socket?
SA: "As compared to the 7-pin Nema socket, the SR socket can be more easily incorporated across a wider range of luminaires. It has superior fixation and higher IP rating (IP65). Its ultra-sleek design makes it more aesthetically appealing, especially in combination with the new breed of LED luminaires, including architectural designs."

Q: How does the new SR Socket help in better photocell integration?
JF: "The SR socket is an open connectivity interface that has been developed by TE Connectivity Corporation and is now available to the lighting industry. This innovative technology has allowed Lucy Zodion to reduce the size and profile of the photocell significantly, allowing us to develop the first low voltage configurable light sensing device (Precizion HALO) for LED street lighting."

Q: Can you tell us what new possibilities the SR socket can bring to the lighting industry?
JF: "It is a great solution for integration of smart city devices. It is designed to provide considerable flexibility to customers in terms of connectivity and allowing them to attach a range of upward and/or downward facing sensors to LED System Ready (SR) street lights. This means that local authorities can use their street lighting infrastructure for much more than just lighting, by connecting light sensors, presence detectors, noise and air quality sensors, cameras etc. now or in the future."

Q: How would you sum up the main benefits of the SR socket for installers and end clients?
SA: "The SR socket is DALI 2 compliant and allows the SR driver to provide a low voltage (24V) supply to various CMS (Central Management System) OLC/node and/or sensors on the luminaire. This offers customers the first ever solution that does not bring 240V AC to the exterior of the luminaire. This in turn negates the risk of fatal electric shock when compared to a 7-pin Nema solution. It is also significantly smaller, whilst still enabling tool-less mechanical attachment and replacement of outdoor lighting controllers (OLCs), photocells and sensors. The revolutionary SR socket, gives the lighting industry the opportunity to make the leap to a safer, smaller and smarter interface that makes our street lights ready for the future upgrades."

Q: Readers will certainly be very interested in this innovation. How can they find out more?
SA: They can contact either Philips Lighting or Lucy Zodion and we will be very happy to discuss the SR socket in more detail, or send additional information.

Visit: www.philips.co.uk/smartcities or www.lucyzodion.com for more information